

INDEX OF SURGICAL PROGRESS.

Ulcers, Abscesses, Tumors.

I. PERFORATING ULCER OF FOOT. Mr. PEPPER. At a meeting of the Pathological Society of London, October 21, 1884, Mr. Pepper presented specimens from a patient with perforating ulcer of the foot and tabes dorsalis. The disease began with a corn on sole of right foot, followed by acute inflammation of skin over dorsum of foot, going on to gangrene. Amputation was performed, but sloughing took place in the stump, and she died. (She exhibited also plantar anæsthesia, absence of knee-jerk, and double ptosis. Gait not ataxic.) At post mortem Dr. Silcock found grey degeneration of the posterior root zone. Microscopically, the whole cord was found affected with diffuse sclerosis. Thickening of neuroglia, especially round grey matter of post. cornua. Post. cornua and roots also involved. Blood-vessels of cord thickened. No normal nerve fibres in post. root zones were seen. There was evidence of hyperplasia of the endo- and epineurium of the sciatic and sub-popliteal nerves, and the axis cylinders were much altered. Dr. S. concluded that the trophic lesions which occur in cases of locomotor ataxy were attributable to structural alteration of the peripheral nerves, rather than to changes in the spinal cord.

Dr. Buzzard suggested that possibly the neural changes might depend on the thickened condition of the vessels of the periphery of the arterial system.

J. E. HINE (Oxford.)

II. DU CANCER PRIMITIF DES GANGLIONS. Par M. PERRET. The author gives the details of two cases of malignant tumor originating in lymphatic glands, of which the following are some of the chief facts: A miner, aged 33, was admitted into hospital, and died on the following day. Two years before, he noticed an enlargement of the glands of the left side of the neck, accompanied by some pain. The condition remained stationary for some months, and it was not until the end of the year that the glands took a more considerable development. From that time he became rapidly emaciated; and increasing cachexia, with œdema of the left arm and lower extremities, and dyspnœa, terminated in death.

Autopsy. The glands on both sides of the neck, especially on the left, of the axillæ, mediastina, and abdomen, formed large bossed masses of a whitish color, the centres of the masses being diffuent. The enlarged glands were adherent, but could be isolated with difficulty. The lungs contained a few whitish nodules. There was serous effusion into the right pleura, and the inferior vena cava was com-

pressed. The liver was normal and enlarged. No increase of the white corpuscles of the blood was observed.

Examination with the microscope showed in the diffuent central portion of the glands masses of clear, nucleated cells three or four times larger than leucocytes, apparently situated in a cavity. In the firmer peripheral portions were distinct alveoli, chiefly elongated, and filled with similar cells.

The author concludes, from the histology and clinical history, that the case was one of true carcinoma of the lymphatic glands, beginning primarily in the glands of the neck.

Since Rokitsanski indicated, in 1842, the possibility of primary cancer of the lymphatic glands, only four authentic cases have been published,—a circumstance attributable to the extreme rarity of the disease, and also in part to the confusion existing in regard to the pathology of lymph-gland tumors. A short review of the recorded cases of the disease is added.

[NOTE. The correctness of classifying these tumors as carcinomata, and of the rarity of the disease, is open to question. Many pathologists, in consideration of the origin of the tumor from connective tissue, and not from epithelial elements, would prefer to term it a lympho-sarcoma having an alveolar arrangement; and I venture to think that descriptions of many such tumors may be found under the heading of lympho-sarcoma. It would be of interest to know the nature of the mine in which the patient worked, as the liability to lympho-sarcoma of workers in cobalt mines is well authenticated.—F. S. E.]

The second case, related in contrast to the preceding, is that of a man, aged 57, who died with lymphadenoma. A year and a half before his death he was attacked with intense diarrhœa of several days' duration, and then noticed that his abdomen began to enlarge, and nearly at the same time he observed painful glands in different regions of the body. His abdomen became much enlarged, and palpation revealed in its median part a number of little tumors varying in size from a walnut to a fowl's egg, and the superficially placed lymphatic glands were enlarged and either discrete or conglomerate. From that time he failed rapidly and gradually lost strength. Death took place with asphyxia, the fatal termination being preceded by an effusion into the left pleura, which was several times evacuated by puncture; the fluid contained numerous red blood corpuscles. On the day before his death, the patient, in getting out of bed, slipped upon the floor, and sustained a fracture of the shaft of each femur. Examination of the blood, practiced on two occasions, showed no increase of the white corpuscles.

Autopsy.—The right pleural cavity contained a large amount of sanguinolent fluid; the left, which had been tapped, contained a small amount; lungs, liver and spleen normal.

The abdominal cavity contained serous fluid, and was nearly filled by an irregular bossed tumour of soft consistence, which occupied the mesentery; it consisted of a multitude of nodules, mostly of the size of a walnut, showing in section a pale,

firmer peripheral part, enclosing a softer yellow central part. Similar tumours were scattered throughout the omentum.

The tracheal and bronchial glands were enlarged. The fractures of the femur were extensively comminuted. The walls of the bones were very thin, pliable, and could be cut with a scalpel. The medullary cavity was filled with an abundant marrow of a rosy-grey colour.

The remainder of the skeleton could not be examined. Examination with the microscope showed that the abdominal tumour was constituted by an agglomeration of glands, consisting of ordinary reticular tissue, with numerous lymphatic cells in the meshes—that is to say, a lymphadenoma. The enlarged lymph-glands elsewhere had the same structure.

The liver contained some islets of reticular tissue. The lungs were normal. The spleen was not examined.

In the medulla of the bones was found a considerable production of reticular tissue, containing a great number of small cells, a very few giant cells, and little or no fat.

The author comments on the rarity of pleural effusion in lymphadenoma, it having been found only eight times among 90 cases in the statistics of Vidal and Ollivier.

In consideration of the slight force with which the fracture was produced, it may merit the name of a spontaneous fracture.

Among the hypotheses put forward to account for the difference in the blood in leucocythemia and lymphadenoma, is one, in which, having in view the blood forming properties ascribed to the medulla, assumes that the marrow of the bones is altered in the former and not in the latter. The fallacy of this is proved by the case related and by four others previously recorded.—*Lyon Médicale*. 1885. January 4 and 11.

III. TREATMENT OF CANCER IN THE FEMALE BREAST. By Mr. OLIVER PEMBERTON. The author lays down the following rules with regard to operation: He would recommend it "where the tumour was increasing, provided that (a) the entire breast was not infiltrated, and that there existed an appreciable line between the deposit of cancer and the healthy breast, and that the parts were not adherent to those below. (b) That the neighbouring glands were not affected by the spread of the cancerous material. (c) Where the skin was neither thickened, nor brawny, or tuberculated."

He would not operate after the age of 55, "except where severe pain as well as hemorrhage attend on open cancer, and the parts admit of healing by clean skin." In elderly women, beyond 55 years of age, the rate of progress of the disease is much slower, constitutional infection is less rapid, and the disease is often of the form termed atrophic or retracting scirrhus, which increases slowly or remains stationary. This form should never be subjected to operation, for, when operated on, such cases are speedily followed by symptoms of cancerous deposits in the internal organs, leading to cachexia and death.

The author strongly advises the complete removal of the indurations of the breast,

commonly appearing in the child-bearing period, between 35 and 45.—*Birmingham Medical Review*. 1885. January. F. S. EVE (London).

IV. HYDATID CYST OF THE PAROTID GLAND AND OF THE MAMMARY GLAND. By Dr. ADOLFO LUIGI (Florence). *Hydatid of the Parotid*. Male, 39 years of age, of robust general health, presented a superficial cystic tumour in the parotid space on one side. The tumour has a history of less than six months, and is steadily increasing in size. An exploratory puncture for purposes of diagnosis was followed by wide spread acute cellulitis. A free incision being made on the following day, a smooth white cyst shelled out, of pearly appearance and delicate texture. The contents of the cyst were alkaline, non-albuminous, and microscopical examination was negative in its results.

Hydatid of the Breast. Female, 25 years of age; seat of tumour, right breast; duration, eighteen months; size, hen's egg; freely movable under the skin, and apparently imbedded in the mammary gland. It was easily enucleated and removed entire through an incision in the overlying skin. The contents of the cyst were a clear liquid, containing pathognomonic hooklets and scolices.

The reporter observes that hydatid cysts are among the most rare diseases that attack the mammary organs; that they seldom attain any great size, and that in the majority of cases they display a hardness that is suggestive of a malignant growth. There is no part of the human body, not excepting the bones, that has not been the seat of hydatid growths.

Hausmann (*Die Parasiten der Brustdrüsen*, Berlin, 1874) has recorded 16 cases of hydatid cyst of the mammary glands. Giuseppe Frey (*Beitrag zur Lehre von Tenia Echinococcus*. Inaug. Diss., Berlin, 1882) in giving an account of an hydatid cyst in the skin over the roof of the orbit, records the statistics of 780 cases that had been collected by him. His figures show 47 per cent. of cases in the liver and the rest in different parts of the body. From this it will be observed how frequently hydatid cysts develop themselves in the liver. These cases, because common, are seldom recorded, and it is therefore safe to surmise that the percentage of cases of hydatids of the liver which actually occur is even greater than that recorded above. The reporter has not been able to find any detailed description of an hydatid cyst in the parotid, published. Klebs (*Handbuch über der pathologischen Anatomie, Erste Lieferung*, S. 150, 1868) says that parasites are rarely found in the salivary glands, and that an hydatid cyst in the parotid has only once been met with. O. Webber (*V. Pittha Billroth*, Bd. III, S. Abth. 2, Heft. S. 390), speaking of cysts in the parotid, says: There is only one case described by Pale. In this instance the tumour weighed 10 lbs. and inclosed cysts, which in themselves contained others; but he was unable to make an examination to confirm his diagnosis.—*Lo Sperimentale*. 1885. January 1.

PIETRO MICHELLI and H. P. DUNN (London).

Bones, Joints, Orthopædic.

I. ON THE SURGERY OF THE EPIPHYSES. By Mr. WHEELHOUSE (Leeds). Comments on the importance of a knowledge of the anatomical relations and periods of

junction of the epiphyses of the long bones, and on the necessity for care in the diagnosis and caution in the prognosis of injuries affecting these parts in young subjects.

Injured epiphyses are prone to inflammation, going on frequently to suppuration, periostitis, and even osteomyelitis. A large proportion of cases of hip-joint disease are due rather to traumatic than constitutional causes. Inflammatory action, starting at the epiphysis, may result in periostitis, affecting the whole shaft and causing partial or complete necrosis. The arrangement by which the long bones grow and receive nourishment in sections, namely, a diaphysis and epiphyses, permits of the death of one portion without completely checking the development or destroying the function of the bone.

Quotes and apparently endorses Dr. Smith of Dublin's opinion, that in the case of the lower end of the humerus, separation of the epiphysis involves only the trochlea and capitellum, the condyles remaining attached to the shaft.

An occasional complication of separation of the epiphyses is compression or obstruction of the main vessels of the limb, leading to gangrene, and rendering amputation necessary. Mentions two cases in which this resulted from separation of the lower epiphyses of the femur.—*Brit. Med. Journal.* 1885. March 7.

T. DUNN (Glasgow).

II. TEMPERATURE OF THE BLOOD ATTENDING SIMPLE FRACTURES. By Dr. GRASSIE. The author, in a preliminary report to the Vienna Society of Physicians on the elevation of temperature in subcutaneous fractures, states that in one-half the clinical cases he found 38° , in the other half 39° ; once 39.7° . In outside patients the axillary temperature never exceeded 37.8° ; in one case of humerus fracture no elevation. Moreover, in young persons he found an increase of indican in urine within 2 days—the larger the bone fractured the more indican. In older persons the increase appears later. Volume of exudation bears no relation to occurrence of indican. In operations on bones an increase of indican always occurs—often not until 8 or 10 days. Since indican appears in various other troubles, plithisis, invagination, cholera, spinal troubles, it cannot be utilized to diagnose a fracture; but its absence disproves a fracture or any process in the bones.—*Wien. Med. Woch.* 1885. May 16. No. 20.

W. BROWNING (Brooklyn).

III. FRACTURES OF HYOID AND OF LARYNX. By Mr. ARBUTHNOT LANE. This paper is of interest as proving these injuries, both more frequent in occurrence and less serious in results than is usually supposed. Mr. Lane quotes Fischer and Darham's statistics, which show a mortality of two thirds of all cases, while on the other hand, he had himself, in examining 100 bodies in the dissecting-room, found fracture of hyoid or larynx in 9 cases, in none of which death had been due to the injury. In 8 of the cases there was fracture of the upper cornua of the thyroid.

Cricoid fracture is by far the most dangerous variety. Fracture of upper cornua of thyroid is easily produced by compression and backward pressure. The cartilage breaks more readily in late adult life than after ossification in old age.

In subsequent discussion, most of the speakers dissented from Mr. Lane's conclusions; but a committee appointed to examine the specimens produced, reported that these fully confirmed the views advanced in the paper.—*Proceedings London Pathological Society. Lancet.* 1885. March 7. THOMAS DUNN (Glasgow).

IV. FRACTURES OF THE ULNA BY INDIRECT FORCE, AND FRACTURE OF THE RADIUS BY TWISTING. By Dr. F. BROSSARD (Lyons). In a volume of 120 pages, published by J. B. Baillière and Son (Paris), the author details clinical facts, and experiments on the cadaver, from which he draws the following conclusions:

Fracture of the ulna by indirect force, scarcely mentioned by some authors, is a lesion of childhood and adolescence—the reason for its occurrence at this age being found in the constitution of the bones at these periods of life, and the relative ability to resist strain exhibited by the osseous tissue and articular ligaments. This solution of continuity may result from two causes—vertical force or twisting. It results from vertical force when, in general adduction of the limb, the ulnar inclination of the hand makes the ulna the agent of transmission to the carpus of the pressure which it receives; from twisting when, by an exaggerated supination, the posterior surfaces of the two bones of the forearm come in contact, and by this contact a force of flexion from before backward is impressed on the ulna.

The seat and form of the fracture vary according to these two mechanisms, and, also, in a very notable degree, according to the ages of the persons injured.

The common characteristic of these solutions of continuity is to be incomplete and subperiosteal; this latter diagnostic point is the only one which can be determined during life.

Since the absence of deformity of the limb and of mobility of the fragments renders these fractures liable to be confounded with osseous contusions the error is to be avoided by careful study of the producing cause, by the important symptom of a limited swelling, and by the pain, the fixed locality of which can be explained by no other cause.

This overlooked lesion may be the point of departure of grave inflammatory accidents. It is important, therefore, that it be recognized, and that it be treated by immobilization, which generally will suffice to accomplish a cure.

A twist in exaggerated pronation may determine in the radius a fracture, hitherto undescribed. It takes the form of a fissure, whose track may be spiral. This fissure is often accompanied by incomplete transverse fracture, and sometimes with tearing away of the lower epiphysis.

V. TRANSVERSE FRACTURE OF THE PATELLA; ASPIRATION OF THE JOINT; SUPPURATION; ANTISEPTIC INCISIONS INTO THE JOINT; SUBSEQUENT WIRING OF THE FRAGMENTS; RECOVERY. By Mr. RIVINGTON. On admission, December 29, 1883, there was much effusion, and a back splint and ice bag were applied; 31st, attempt to approximate fragments by strapping; January 11, joint tapped antiseptically with trocar and canula, only two ounces of blood and serum removed, antiseptic dressing and ice; 16th, attempt to approximate fragments by Malgaigne's

hooks inserted into strapping and gutta percha, had to be removed; 23d, pus oozing from aspirator puncture, joint freely opened and washed out antiseptically; 30th, antiseptic suture of patella; March 7, antiseptics discontinued; March 10, wounds healed. Result when discharged, bony union; but very little movement. No attempt made to break down adhesions.

The interval between the opening of the joint and the suture of patella was to prevent bringing discredit upon the operation in case sepsis had already occurred.—

Lancet. 1885. January 24.

B. WAINEWRIGHT (London).

VI. DISLOCATION OF THE FIFTH CERVICAL VERTEBRA; REDUCTION; RECOVERY. By GUIDO THOM, M.D. Patient fell from a wagon, the wheel passing over him. Symptoms observed—paralysis of right side and of left arm; deviation of uvula to right; dilatation of left pupil; difficulty of breathing, apparently from paralysis of respiratory muscles; marked prominence of 6th cervical vertebra.

Reduction of the dislocation by extension and manipulation produced immediate improvement in breathing, but no change in other symptoms. Paralysis slowly improved, leaving, after six months, only a slight limp. [The case seems to have been complicated by cerebral compression, probably from hæmorrhage at base. T. D.]—*Austral. Med. Gaz.* 1885. January.

VII. COMPOUND DISLOCATION OF ELBOW-JOINT, WITH DIVISION OF MAIN ARTERY AND VEIN. By Mr. RUSHTON PARKER. Patient, a female, imtemperate, fell down stairs; sustained dislocation of elbow; the humerus, stripped of muscles for lower 3 inches, protruding through wound 4 inches long in front of joint; main vessels torn across. The wound was cleansed with carbolic solution, the dislocation reduced, the vessels tied with catgut, the arm wrapped in a gauze dressing, and the elbow fixed in acute flexion, no splint being used. No drainage tube inserted. Wound dressed daily for five days. No pus formed, and healing was complete in four weeks. No movement of joint permitted till after four weeks. A perfectly useful joint resulted. Success due to prompt disinfection of wound, absence of sutures, free opening in skin preventing tension, position of acute flexion (which is superior to splint), and disuse of passive motion, in itself a frequent cause of inflammatory mischief.—*Lancet.* 1885. March 14.

T. DUNN (Glasgow).

VIII. ON THE POSTURES OF INFLAMED JOINTS. By Prof. LÜCKE (Strassburg). The theory of Bonnet still holds good as applied to acute inflammation of joints; that the position is adopted in which the capsule of the joint can hold the largest quantity of fluid—namely, a flexed position. The author, however, calls attention to the fact that the amount of the effusion may not correspond with the degree of flexion. Moreover, effusion of a non-inflammatory nature, such as hæmorrhage due to traumatism, and especially in cases of hæmophilia, caused only a very slight flexion of the joint. In these cases inflammatory irritation was wanting, the capsule was less yielding, and muscular action came into play. In acute serous synovitis, too, as in poly-articular rheumatism, or uratic diathesis, no corresponding posture was adopted. In these

cases the patient was muscular and energetic, while in nervous or delicate individuals the flexed position was excessive.

In cases of chronic inflammation, Bonnet's theory never could be applied, owing to the gradual distension of the capsule and the absence of inflammatory irritation. What change there was in these cases was due to the yielding of the ligaments, and to destructive processes, as was also the case in arthritis deformans.

In cases of chronic granulating or tuberculous synovitis, and in cases where the epiphyses were primarily affected, Bonnet's theory had only been very restrictedly applied.

Generally speaking, there was a tendency to attribute the position of the joint to the option of the patient, or to a certain adaptation of means to ends, since that posture was adopted which admitted of the relatively easiest and most painless use of the limb.

The painlessness at the commencement of chronic inflammation of joints, in the opinion of the author, allows of a more protracted use of the limb. The positions found are, therefore, dependent in these cases on muscular conditions.

Prof. E. Fischer found that the flexor muscles in all extremities were more advantageously supplied with blood vessels than the extensors. Grützner showed that the histological structure differed in the extensors and flexors. It is also known that the impairment of motor function, due to fatigue after electric stimuli, is greater in the extensors than in their antagonists.

Clinically and pathologically analogous facts have been observed by Sonnenburg and Lücke: the extensor muscles become atrophied earlier than the flexors; they react with less energy, are of lighter color and more anæmic. In like manner voluntary movements are impaired.

In cases of chronic gonitis we observe an angular position of the joint, combined with a relaxation of the quadriceps. But which symptom is the primary one? In answer to this question, the author infers: (a) either the muscle is atrophied from inactivity, owing to the infiltration of the intra-articular ligaments and the congestion of the capsule—since the extension of the capsule by fluids is slight at first—it may, however, be objected that the extensors are still used at first; (b) or else some other unknown cause is at work, some reflex disorder of the vasomotor nerves; (c) or else the contracture of the flexors is the primary cause, resulting from the inflammatory irritation in the joint. This theory is, however, without sufficient foundation.

The author himself believes that in chronic granulating joint disease, the flexed position is induced by the irritation due to the inflammation, as in that posture the least amount of pain is incurred; if the patient now attempts to walk, he naturally contracts all the muscles, so as to avoid any movement (which would cause pain). This contracted state of the muscles, however, tends still to heighten the degree of flexion, as the flexors are naturally, and anatomically, stronger and less easily fatigued than the extensors. Therefore, the longer this flexed position has been

maintained, the more marked it becomes, as is the case in paralysis originating in the nervous centres. Ankylosis, as well as continued recumbent posture, prevents such contractures from becoming exaggerated.

The atrophied state of the extensor muscles, which never again can be wholly repaired, renders it difficult to attain good results after forcible extension and after excisions of the joints. In hip joints it is especially the adductors, in the shoulder the pectoralis major, that are difficult to contend with.

The author therefore concludes that in chronic joint disease the posture of the joint is adopted voluntarily or from expediency, so as to facilitate the use of the limb, in the same manner as scolio-lordosis is adopted to compensate adduction, disappearing when the patient is confined to his bed, as its only purpose is the avoidance of limping. In the knee joint a valgus position frequently results from walking with the heel raised, which is facilitated by an external rotation at the knee.

In the elbow, the weight of the forearm compensates the tendency to contracture, as does also the fact that in pronation, which is the natural position of the forearm, the flexors do not exert as much force as they do when the arm is supinated.

The posture is further influenced by the destruction of parts of the joints; adduction in the hip joint, for instance, is caused by destruction of the acetabulum, as the varus position of the knee is due to destructive changes affecting the internal condyle of the femur or tibia.—*Deutsche Zeitschrift für Chirurgie*. Vol. 21. 5. Mar. 9, 1885.

IX. ACUTE OSTEOMYELITIS AFFECTING THE JOINTS. By Dr. W. MÜLLER (of Göttingen). Although the greater part of this paper is taken up with sketches of cases, it possesses unusual interest, due not only to the fact that a new and important aspect of the subject is introduced, but also to the very able, concise literary review of the subject with which the author commences his treatise.

Arguing from analogy, and from the very generally known and accepted fact that tuberculous joint disease is usually caused by the perforation of an osseous focus, situated in the epiphysis of the bone, into a joint cavity, the author asserts that osteomyelitic affections of joints originate in the same manner, although this fact is comparatively little known and appreciated. On this account, and from clinical and therapeutical reasons, it is desirable to separate the diffuse form of osteo-myelitis, which attacks chiefly the diaphyses of bones, from these joint-affections. Twenty years ago Volkmann, and subsequently Demme, spoke of such joint-disease occurring after foci in the epiphyses, while most writers only allude to joint-affections associated with disease of the diaphyses. Roser, on the other hand, believed that joint-disease could occur independently and separately from necrosis of the bone ("pseudo rheumatic" coxitis, etc.), or even that the bone could become secondarily affected by the joint-trouble. Lücke, who first characterized osteo-myelitis as an infectious disease, mentions these isolated foci, but does not distinguish them from the diffuse form. Schede first makes a distinction between isolated foci in the diaphyses and the diffuse affection of the diaphysis; and Volkmann, as Driessen tells us, distinguishes

between early affections of the joints and those occurring after four or six weeks, which latter ones he believes due to infection from the diseased diaphysis; but he does not mention foci in the epiphysis. Albert alludes to the subject in his treatise on necrosis of diaphyses, believing such a focus easily mistaken for a tuberculous one, and expresses doubt as to the occurrence of primary synovial osteo-myelitic affections. Rosenbach and Kocher observed small foci, even in diffuse disease of the bone-marrow. The author himself concurs in the opinion expressed by Schede, that the foci in the epiphyses should be considered as separate from other ones, but he includes those situated in smaller bones, on account of their proximity to joints.

He then proceeds to publish twenty-five cases of joint-affections in osteo-myelitis, which were treated during the last seven years, in the Surgical Clinic in Göttingen. In sixteen of these the hip-joint was affected, in three the knee, the foot in two, the hand in one, and in three cases several joints were simultaneously attacked.

Traumatisms were present in the history of very few cases. The disease commenced suddenly, and usually attacked individuals under eighteen years of age, but having arrived at puberty. Males were more frequently affected than females, in proportion of four to one. The disease commences as an infectious disease, with early localization, the characteristic symptom in these cases being the affection of the joint-regions alone. Speaking of the etiology of the disease, the author touches on the question of micro-organisms, and mentions the specific microbe. Pathological investigation reveals osteo-myelitic foci, exactly similar to tuberculosis, already developed in a few days or weeks, and containing a sequestered piece of bone, which, however, is not always found, it having been absorbed by the granulations covering the walls of the cavity. These small sequestra resemble the tuberculous ones; the latter, however, are dry and present a cheesy infiltration, and are continuous with their surroundings.

The specific osteo-myelitic granulations which line these small cavities, compared with tuberculous ones, are yellower, softer and pulpy; microscopically examined, they contain elements of fatty degeneration and a great number of cocci, from which the characteristic yellow growth may easily be obtained by the aid of culture experiments. They, of course, never contain tubercle. In the cases given the foci described were found quite near to and perforating into the joint. This could the more readily be observed, as the cases were treated by an early incision of the joints and removal of the foci with the chisel.

The author, therefore, is of opinion that the suppuration of such joints is due to the perforation of such foci into them, and firmly believes that all destructive processes of the articular portions of bones are occasioned by such primary osseous foci.

The immediate reaction in the vicinity of such foci may consist in sclerosis, or in rarefaction of the bone.

After perforation into a joint-cavity, the synovial membrane may react by setting up any kind of inflammation; either serous or sero-fibrinous exudate may ensue, or

a granulating synovitis (differing from tuberculosis by the absence of tubercle, and being of a different color), or a purulent one.

After giving more detailed consideration to various joints in turn, the author enumerates the symptoms of the disease, pointing out how it at first simulates an acute joint-affection, but differs in the course it has to run. There are frequently points to be made out that are sensitive on pressure. One may even have the impression of a cavity in the hard tissues.

The acute symptoms usually subside after a period of from three to six weeks. The joint very rarely can be quite restored to health, an ankylosis most generally resulting, or else a chronic state of infirmity ensues when fistulae are present.

A precise history of the beginning of the disease is of the greatest importance in the diagnosis. An exact local examination is, however, frequently attended only with negative results, except at operation. The prognosis as to the life of the patient is favorable; but the joint affected will remain more or less useless.

As regards treatment, an operation is almost always demanded. Abscesses are, of course, to be opened. Affections of the hips require an excision of the joint, with removal of the focus and of the sequestra, and possibly of the entire membrane of the joint, the prognosis being better than in similar tuberculous affections. For other joints, incisions and partial excisions and drainage will suffice.—*Deutsche Zeitschrift für Chirurgie*. Hft. 5 and 6. 1885. March 9.

W. VAN ARSDALE (New York).

X. EXCISION OF HEAD OF FEMUR IN A CASE OF UNREDUCED SPONTANEOUS DORSAL DISLOCATION, OCCURRING DURING FEVER. By Mr. WM. ADAMS. It occurred in a lad, aged 11 years, suffering from rheumatic fever. The limb was contracted and useless, and two unsuccessful attempts at reduction had been made. The head, which was on the dorsum ilii was reached by a T shaped incision. The capsular ligament was ruptured. The neck was sawn through a little below the margin of the articular cartilage. The limb afterwards was perfectly straight, and the movement of the hip joint was free in all directions.

H. H. TAYLOR (London).

XI. THE PATHOLOGY AND ETIOLOGY OF CONGENITAL CLUB-FOOT. By ROBERT WILLIAM PARKER and SAMUEL GEORGE SHATTOCK. This is a contribution to the pathology and etiology of congenital deformities, which is of great interest, and bears witness to the industry and acumen of its authors. They commence with a description of six cases dissected by themselves, and present therewith diagrams illustrating the form of the astragalus in each case, accompanied, for purposes of comparison, with others of the forms of normal astragali in man and the anthropoid apes. Where there was an opportunity of examining the spinal cord, nothing abnormal was found. After removing all the muscles from the legs affected, considerable force was still required to straighten the foot. This resistance, however, disappeared when the ligaments were divided. In a typical case of varus, the following changes were found in the astragalus: Its trochlear surface is extended backwards as far as the posterior edge of the lower articular surface. The extent of this additional surface is still

easily recognizable, and it is clearly due to the condition of extreme extension of the ankle-joint. On the contrary, the extent of the trochlear surface is proportionately lessened in front, owing to the fact that it no longer forms part of the proper articulating surface. In the next place, the neck of the astragalus is lengthened and directed inwards with an unnatural obliquity. "The articular surface of the head is prolonged on its inner side, and instead of being uniformly convex, it is divided into two parts, the planes of which meet at an obtuse angle; the inner and larger corresponds to the displaced navicular bone; the outer portion, which looks forward, is unopposed, instead of being, as in the normal condition, in contact with the navicular. The portions which are redundant, both on the head and on the trochlear surface, correspond in extent with the normal limits, but do not present the polished surface of the rest of the articulating areas, being covered with a layer of loose connective tissue. The internal malleolar facet is unrecognizable, doubtless because it, too, has ceased to form part of the proper articulating area." Case 3 showed a marked amount of rotation inwards of the tibia and fibula. In it, also, band-like adhesions existed between the trochlea and the opposed margins of the tibia and fibula. This was an anencephalous fœtus. The 6th case presented one of the bursal cavities, regarded by Volkmann and Lücke as indicative of local, intra-uterine pressure.

The authors next sketch the different theories which have been advanced to account for congenital club-foot. They think that only in a few exceptional cases do nerve lesions play a part in the etiology. They agree with Adams that the bone changes are a result, and not a cause of the mal-position. They confirm Hueter's statement that the axis of the neck of the astragalus at birth is normally directed with a considerable degree of obliquity inwards and forwards. The redundant portion of the articular surface on the head of the astragalus, already referred to as being covered with a layer of loose connective tissue, they regard as "undoubtedly" showing that displacement of the foot has occurred at a period subsequent to the development of an astragalus of normal conformation. In one of the cases, that of an anencephalous fœtus, they assert that the astragalus was quite normal—"a fact which argues strongly against mal-formation of the bone as the cause, or even an essential element of the condition." They omit, however, to give any account of the condition of the other bones, except that the "calcaneum was normal." The anatomy of club-foot has not yet been proved to be wholly concerned with the astragalus. The authors afterwards point out that apes are not talipedic, although obliquity of the astragalus is normal in them. They then give a long, ingenious and forcible argument that club-foot and other analogous deformities are caused by intra-uterine pressure. The usual position of the fœtus in utero is described. Various specimens of fœtuses with club-foot, preserved within their membranes, are referred to, and circumstances noted which suggest a mechanical explanation. It is asserted that other joints are affected in a way strictly identical with clubbing of the feet. The so-called "*genu recurvatum*" is quoted as an example. With regard to heredity, and its being sometimes the father who transmits, they say this does not militate against a mechanical theory of causa-

tion, because it is now known that the liquor amnii is a fetal, and not a maternal product.

In summing up, they say: "Calcaneus, we hold to be an exaggeration by environment of the position natural to the fetal feet during the later period of intra-uterine life, some limitation of extension-movement being normal at the time of birth."

"Varus, we think, results from similar causes, but these commence to act at a much earlier period of intra-uterine existence, the great alterations in form of the bones, which usually co-exist, and the adhesions at times met with in the ankle-joint, pointing to this."—*Reprint from the Transactions of the Pathological Society of London.* 1884.

XII. OBSTINATE CLUB-FOOT TREATED BY DIVISION OF LIGAMENTS; EXCISION OF CUBOID. By Mr. C. B. KEETLEY (London). A clinical application of the lessons deducible from the pathological descriptions of Messrs. Parker and Shattock (*vide supra*). In an obstinate case of congenital equino-varus, which had been by no means cured by excision of a wedge, including the cuboid, on April 7, 1885, he made a somewhat curved incision from over the inner malleolus forwards and slightly downwards, along the inner border of the foot as far as the internal cuneiform. Having the abductor pollicis well retracted, the anterior part of the internal lateral ligament of the ankle-joint and the internal scaphoideo-cuneiform ligaments were easily exposed and divided, the corresponding joints being at the same time necessarily opened. The inner part of the calcaneo-scaphoid and the tibialis posticus tendon were at the same time divided.

The effect was most excellent. The foot could immediately be placed in a perfect position with ease. Not only the varus, but the calcaneus disappeared. The full effects of the former excision of the cuboid, which had been hidden by the tension of the ligaments while undivided, at once appeared.

The reason why the really splendid improvement of this case is attributed to the combination of resection with division of ligaments is that, when the bone was removed, it was evident that the tension of the deep structures on the inner side of the foot was preventing the opposite sides of the gap from coming together. Had the operator then been aware of Messrs. Parker and Shattock's observations, he would have cut down on the ligaments at once.

The wound healed by first intention, except at site of drainage tube, which closed a few days later. Perfect position is maintained. Plaster of Paris case.

XIII. OSTEOTOMY AND OSTEOCLASIS. DEMONS (Bordeaux). The author states, as a result of experiments made on the dead subject, that osteoclasia always produces a sub-periosteal fracture. In the living subject he asserts that the results are as good as those of osteotomy. For these reasons he prefers osteoclasia. He acknowledges a little remanent stiffness of the knee-joint. He uses the apparatus of Robin.—*French Surgical Congress.* April 6, 1885.

XIV. EXCISION OF THE ANKLE JOINT. J. REVERDIN (Geneva). M. Reverdin's mode of proceeding permits the operator to decide, when he has opened the ankle

joint, to what extent he will remove the parts. His incision extends from the edge of the tendo Achillis forwards almost horizontally beneath the external malleolus as far as the insertion of the peronei. He has invented a light form of forceps with which to seize the astragalus. When that bone has been removed, he examines carefully the parts left, and if he finds it necessary for the complete examination or removal of the disease, divides the tendo Achillis. Or, on the other hand, he can now change the operation into an amputation of the foot with an internal plantar flap.

It is for strumous joint disease that the author adopts this plan. After injuries he proceeds differently, preferring "le procédé à incision jambière."

He reminds us that tuberculosis of the ankle joint begins in the malleoli or in the astragalus.

He has found no inconveniences follow division of the tendo Achillis.—*French Surgical Congress*. April, 1885.

XV. EXCISION OF THE ASTRAGALUS. OLLIER (Lyons). Formerly this distinguished surgeon used, in resecting the ankle joint, to concern himself chiefly with the malleoli, and to regard the astragalus as of comparatively second-rate importance. He now takes the reverse view. He always removes the astragalus. "The astragalus," he says, "is a bone of little vascularity, which, once attacked, is incapable of recovery."

He has done this form of operation twenty-one times. He removes the astragalus, and thus clears the way for examination of the deep parts, etc. If the malleoli are affected, he removes the disease, but he proceeds economically, and always leaves a part of them. Even when the pus comes from the tibia, he removes the astragalus and scrapes the former bone.

After extirpation of the astragalus, the calcaneum mounts into its place between the malleoli. The cavity is soon filled with a plastic, osteo-fibrous mass which permits the restoration of the normal movements, and, although the foot is slightly shortened, its form is preserved perfectly.

Like M. Reverdin, he prefers small forceps with which to seize the astragalus.

The extirpation of the astragalus in good time can do immense benefit, and permit the preservation of useful feet in cases which must have come to amputation. had the surgeon waited too long without interfering. The operation is not serious. Of the last 15 cases, of which some were in a deplorable state of general health, Ollier had not lost one.

The operation should be reserved for children, adolescents, and young people.—*French Surgical Congress*. April, 1885.

XVI. "POSTERIOR TAR-SOTOMY" FOR OLD CASES OF TALIPES VARUS. GROSS (Nancy). In two cases M. Gross removed the astragalus, and though the improvement was marked, it was far from perfect. There still remained much incurvation of the inner border of the foot. He had also divided the plantar fascia.

In a third case he removed the astragalus, the external malleolus, the anterior ex-

tremity of the os calcis, and divided the tendo Achillis and the plantar aponeurosis. On the other foot of the same patient he repeated this operation, but left the malleolus. "The child has now for a long time walked and run without fatigue, and its two feet have a form absolutely correct." The author exhibited casts.—*French Surgical Congress*. April 6, 1885.

XVII. COMPLETE "ANTERIOR TARSECTOMY." OLLIER (Lyons). In 1874, at Lille, the author declared himself as preferring irregular and partial operations, supplemented with the use of the actual cautery; but he has now seen reason to change his opinion, and to prefer regular and typical resections.

The peculiarities of tarsal disease are due to the multiplicity of bones and articulations. One is never sure as to the limits of disease in a given case. If one leaves the disease "under a compressing bandage, or some immovable apparatus," to advance, soon will come the necessity for amputation. But it is possible, by operating early, to prevent this progress of disease. It is under such circumstances that Ollier recommends "anterior tarsectomy."

The operation consists of the removal of the scaphoid, cuboid and three cuneiforms. Immediate union is not looked for, but drainage tubes are used freely, and complete cicatrization not expected in less than two or three months at the earliest. The loss of substance is not made good by new bone. Hence, considerable shortening, about an inch and a half, is inevitable. Moreover, there is a tendency to convexity of the sole of the foot from tilting up of the heel, as well as of the toes. Still the functional result is excellent.—*French Congress of Surgery*. 1885. April 6.

C. B. KEETLEY (London).

XVIII. ON THE CAUSE AND CORRECTION OF DEFORMITY WITH ANKYLOSIS, AFTER HIP-JOINT DISEASE. By C. T. POORE, M.D., (New York). In cases of recovery from hip-joint disease, with the joint ankylosed in an unfavorable position for easy locomotion, the real cause for the deformity is flexion and adduction of the limb. Of these two factors, adduction is the most important. When ankylosis at the hip is unavoidable, a certain amount of flexion is desirable. The author fixes as a standard an angle of from 125° to 135° . In the course of the mechanical treatment of hip-joint disease, particular attention should be paid to the prevention of adduction, and for this purpose all hip-splints should be provided with an abduction screw, by means of which the limb should be kept in a slightly abducted position.

For the correction of adduction, after ankylosis has taken place, a section of the femur below the trochanter minor is advocated, to the exclusion of *brisement forcé*, osteoclasis, or osteotomy through the neck, or between the trochanters. In the performance of the operation, care is to be taken that the section is made at right angles to the long axis of the femur, without reference to the pelvis. Before removing from the operating table, a long splint, extending from ankle to axilla, is to be applied. After removal to bed, extension by weights sufficient to steady the limb—this to be increased, after the third day, to the degree required to stretch contracted muscles and adhesions. After this has been accomplished, the limb may be placed

and kept in any required position. Under no circumstance is the patient to be allowed to sit up in bed, until after consolidation has taken place. The position of the limb as to adduction must be constantly guarded against. Plaster of Paris splints are inefficient and to be rejected.—*N. Y. Med. Jour.* 1885. May 16.

XIX. ANKYLOSIS OF BOTH HIP-JOINTS; RESECTION OF HEAD OF RIGHT FEMUR AND OSTEOTOMY OF NECK OF LEFT FEMUR, IN THE SAME PERSON. By Dr. MORRHORST. Man of 24 years. In his 9th year, coxitis on the left from a fall. Suppuration, and later ankylosis. At present an ankylosed subluxation of left caput femoris forwards, with leg much adducted and flexed. Also, ankylosis of right hip, believed to have resulted from non-use. Right thigh adducted, flexed, and rotated inwards. Walking was very difficult.

v. Langenbeck chiselled through neck of right femur, and resected its head. Extension. Primary union. Simple osteotomy in left side—3 weeks after right. Incision on anterior aspect, external to crural nerve. Cicatricial bands formed a great impediment. Also a primary. After each operation, drainage for one day, when the tubes were removed and the wound completely sewed up. (Kocher's method.) Bismuth (2 per cent.) was used on the wounds. Prolonged vomiting, circumscribed inflammation of lip or tonsil, and signs of desquamative nephritis followed in one or both cases—also described by Kocher as occurring after such use of bismuth. Passive motion begun some 4 weeks after each operation. The muscles, out of use nearly 15 years, were much atrophied, but improved fast from motion and faradization. Attempts at standing and walking begun 2 months after second operation. Position of legs normal. Rapid improvement of mobility of new-formed joints, up to flexion of 45°. Can walk well with stick, and stand easily without support. The osteotomy gave a better result than the resection.—*Arch. f. klin. Chirg.* 1884. Bd. 31. Hft. III.

XX. RESECTION OF BOTH HIP-JOINTS FOR ANKYLOSIS. By Prof. N. STUDENSKY (Kasan). Peasant girl of 21 years. Her history points to an inflammation of both hip-joints 14 years before, despite which she was made to scrub floors. This caused the thighs to ankylose straight out on each side and at right angles to the trunk. Joints below hip all right. Musculature of lower extremities and even seat atrophic. Walking performed with rocking motion of trunk. Height, 115 cm. Only one other completely similar case found (Busch in *Langb. Arch.*, Bd. IV).

Resection of neck of femur, June 18, 1883. Cut down through angle made by limb with trunk, where the soft parts proved to be 10 cm. thick. Removal of a wedge of bone from neck of femur, and fracture of the remaining bridge. The end of the femur was then pushed out through wound, cut straight across between the trochanters, and rounded. Want of room and instruments prevented Volkmann's method of re-forming the acetabulum. Extension for a month. Passive motion began at end of 2 months. Exercise and electricity greatly improved muscles. On using the leg, the end of femur gradually glided above the acetabulum to the outer surface of the ileum.

Left hip operated a year after right. Incision on inner anterior surface, necessi-

tating ligation of art. pud. ext. and art. circumflex. fem. int. Here the soft parts were but $2\frac{1}{2}$ cm. thick. This time a socket was chiselled out. Passive motion after 2 weeks. After 2 months, began walking, and after 4, needed only a stick. The left femur did not slip, so that this side remained 2 cm. longer than the right, and had better motion. Her height was now 130 cm. Two accompanying illustrations.—*Centh. f. Chirg.* 1885. No. 15.

XXI. OSTEOTOMY AND RESECTION OF FEMUR IN BILATERAL ANKYLOSIS OF THE HIP-JOINT. By R. VOLKMANN (Halle). A powerfully built man of 22 years, had had repeated attacks of articular rheumatism, leading to synostosis of hip, knee and ankle joints and both sides. His hips were flexed to a right angle, and knees to an acute angle, while the feet were in equinus positions—the one strongly pronated, the other supinated. He had lain 5 years in bed, unable to stand or sit, or even lie on his back, or turn over. Subtrochanteric osteotomy on right hip, and chisel resection on left, resection of both knees, forced osteoclasis of both ankles; and metatarsal amputation on right foot enabled him to regain a certain independence, sit on a low chair, lie on his back, and get about with a stick. According to V.'s experience, if, in attempting to stretch a stiff joint, the muscles show no contraction, it is a pretty sure sign of bony union.

Brisement forcé of the right foot, without injury to the skin, led to suppuration and a serious general condition. V. says some similar cases have taught him that after acute infectious diseases, as acute articular rheumatism and acute osteomyelitis, extensive subcutaneous injury, in regions where disease germs evidently still remain, may prove very dangerous, lead to relapses and fresh inflammation.

Brisement forcé of a contracted knee following osteomyelitis, even years after it has healed and where no fistula remains, may bring on a typical relapse; or after acute rheumatism with relapse, it may cause suppuration of the joint. Such germs are, however, entirely amenable to antiseptics—hence, an open wound is preferable. The above case healed speedily under drainage, etc. Six months later subtrochanteric osteotomy, with removal of a wide of wedge bone and resection of knee on right, at one sitting. The limb could be fully extended. Primary intention in 10 days. While transporting the patient to bed the left femur broke—so brittle and atrophic had it become. It, however, consolidated very rapidly under plaster. Five months later metatarsal amputation on right, on account of distorted toes, and a year after this, resection of left hip. Femur was chiselled through just below tip of trochanter. Extreme adduction of leg, so that neck and head of femur could be removed with chisel, and the old socket nicely formed again. Extension from knee and thigh, the leg passing down through an opening in the mattress. Excessive œdema developed in the hanging leg, and only slowly disappeared. Here also primary union. Five months later, resection of left knee. Patient thus gained a firm, straight right leg and mobility in left hip. Volkmann has performed osteotomy and chisel resection with restoration of hip-socket 29 times, with success in each case. Chisel resection and restoration of the socket is advisable in the more favorable cases, especially

those where the extremity is not too much shortened and the muscles are still functional—principally flexion-contractures and the rarer ankyloses in abduction. Where only a correction of position and an immovable union is desired, he points out the superiority of osteotomy below the trochanter, with section of cicatricial bands, and even, if necessary, the contracted muscles (ileo-psoas). Where both hip-joints are to be operated for ankylosis, he does not find it best for purposes of walking to secure mobility in more than one. The resection should be done first, and its result awaited. If a movable joint is not obtained, an opportunity will still remain to attempt to procure one by a similar operation on the other side.—*Centbl. f. Chirg.* 1885. No. 15. April 11. W. BROWNING (Brooklyn).

Gynæcological.

I. FIFTY CASES OF ABDOMINAL SECTION, WITH REMARKS ON LAPAROTOMY. By JAMES B. HUNTER, M.D., (New York). Of the cases reported, 27 were cases of ovariectomy, as usually understood by that term, of which 23 recovered and 4 died; 17 were extirpations of ovaries and Fallopian tubes, of which 12 recovered and 4 died; 5 were extirpations of uterine fibroids, with 4 recoveries and 1 death; and 1 was for the relief of pelvic abscess, terminating in recovery. In all, 50 operations, with 9 deaths. Details of a large number of cases, that presented features of special interest, are given. The author advises that, where there have been extensive adhesions separated, or where any portion of a cyst remains, or where there is a very large pedicle, the use of a drainage tube is advisable, the best tubes being those of glass, of small caliber, perfectly straight and without openings at the side. He considers a carbolyzed spray to be invaluable in the operating room, but on no account to be allowed to play directly upon exposed abdominal viscera.—*N. Y. Med. Jour.* 1885. April 4.

II. INDICATIONS FOR OPERATION IN INCOMPLETE LACERATIONS OF THE PERINEUM. By W. G. WYLIE, M.D., (New York). The conclusions of this author are: 1. As a rule, when the perineum is completely severed, so that fecal matter escapes passively, the position of the uterus is not affected. 2. The external or lower part of the perineum may be torn to a considerable extent, and the position of the uterus will not be affected. 3. When the inner and upper part of the perineum is torn or over-stretched and relaxed, prolapse of the posterior and anterior vaginal walls will take place, and, in time, the uterus is retroverted, prolapsed, and may be forced out of the pelvis. 4. The explanation is that when that part of the perineum formed by the fibres of the levator ani and pelvic fascia, where they encircle and are attached to the lower end of the vagina and anus, are torn apart, and the lower end of the vagina and the upper part of the anus are loosened, so that they are not held up and elevated when intra-abdominal force is exerted, as in straining at stool, both are forced out through the vaginal outlet, and they pull and drag down the uterus, and in time result in hernia of the pelvic organs. 5. In operating to restore the parts, we should aim to reunite the separated edges of the levator ani and pelvic fascia, and fix them to and

in front of the lower end of the vagina and the anus, and lower end of the rectum. 6. This can be done efficiently only by denuding the retracted tissues on either side of the rectocele, and uniting them over the rectocele. As the most important laceration is within the ostium vaginae, to reach these tissues the operation must be within the vagina; and to secure good apposition and to avoid dragging down and adding to the tension, most of the sutures should be passed within the vagina from side to side.—*The Med. Record.* 1885. March 28.

III. TWO CASES OF GASTROTOMY FOR EXTRA-UTERINE GESTATION. By JAMES BRAITHWAITE, M.D., (London). These two cases of successful operation are of interest, especially with regard to the pathology of this condition. In both there was the history of an apparent rupture of a tubal pregnancy—at three months in one case, and at seven weeks in the other. In both, the pregnancy went on to full time, but the child, although well developed, was dead at the time of operation. In each case the uterus was found to be small—*i. e.*, 3 inches and $2\frac{3}{4}$ inches, and the cervix uteri to be comparatively large. In one of the cases, the containing cyst was extra-peritoneal—*i. e.*, the fetus had passed down between the layers of the broad ligament, and then upwards between the peritoneum and the anterior abdominal wall. In the other case, the fetus was found in a false cyst, formed by inflammatory adhesions around it, and was lying within the peritoneum, but adherent to it at the anterior abdominal wall. Contrary to what one might have expected, the extra-peritoneal cyst was gangrenous at the time of operation, while the cyst which was formed anew within the peritoneum lived, and probably healed by contraction, although this is not specially mentioned. The placenta was differently placed in the two cases, being deeply situated in the extra-peritoneal case, and adherent to the anterior abdominal wall in the other case, this latter being evidently a new attachment. The placenta was detached piece-meal in both cases. There was no sign of septic poisoning in the case in which the cyst and placenta sloughed, and no mention is made of any in the other case. Except that the sloughing cyst was washed out with warm carbolic water, the details as to dressing are not given.—*Lancet.* 1885. January 3.

C. W. CATHCART (Edinburgh).